DRAFT FY 2008 JOINT END-OF-YEAR REPORT OF THE STATE OF UTAH'S HAZARDOUS WASTE PROGRAM

by

The U.S. Environmental Protection Agency - Region 8
Solid and Hazardous Waste Program
and
The Utah Division of Solid and Hazardous Waste

INTRODUCTION

This report presents the results of a joint end-of-year (EOY) review of the Hazardous Waste Program (HWP or Program) as administered by the Utah Department of Environmental Quality (UDEQ). Utah is an authorized state under the Resource Conservation and Recovery Act (RCRA), and the Utah Division of Solid and Hazardous Waste (the Division) within UDEQ is the principal implementer of the program. EPA Region 8 conducts oversight of the program and provides program and technical assistance to the state.

UDEQ and the Region 8 office of the Environmental Protection Agency (EPA) entered into an annual agreement, the Utah Performance Partnership Agreement (PPA), for administration and implementation of its authorized hazardous waste program during FY 2008 (October 1, 2007 - September 30, 2008). The PPA includes the annual grant work plan for the hazardous waste program of the Division.

This report has been prepared, as provided in 40 CFR 35.150, as a means to evaluate the State's efforts to fulfill that work plan. The report also serves as the EPA's overall review of the authorized program in Utah, and includes an analysis of the program's progress toward addressing long-term state and national RCRA program goals and objectives.

This report also contains some information on Utah's waste minimization activities relating to the Resource Conservation Challenge (RCC). Many of these activities relate to non-hazardous solid waste, and are both voluntary in nature and not part of the state's authorized hazardous waste program. They are discussed here to provide a more complete picture of the state's waste programs. Please note that compliance monitoring and enforcement (CM&E) information has been entered into RCRAInfo throughout FY 2008. Therefore, specific CM&E program activity is not included in this report but can be obtained via existing reports available through RCRAInfo.

This report and its findings are based on the State's data in the RCRAInfo database and other information provided by the State.

This review is based on the Program Standards and Oversight Procedures (PSOP). Under these standards, a state Hazardous Waste Program is evaluated for 19 program criteria organized under four key program areas: Program Management, Pollution Prevention and Hazardous Waste Minimization;

Safe Waste Management; and Corrective Action. A table summarizing EPA's findings for the program's performance, as measured against the program standards for the 19 program criteria is included as an Attachment. EPA notes that, for FY 2008, Utah met the standards for all 19 program criteria.

SUMMARY OF FINDINGS

Utah's FY 2008 PPA included commitments in the areas of Waste Minimization, Permits, Closure, Corrective Action, Training and Technical Assistance, and Environmental Justice.

During FY 2008, the Division met or exceeded the standards for all 19 program criteria (see Attachment.) The Division continued its commitment to a high level of activity for Pollution Prevention and Hazardous Waste Minimization, particularly with its programs for recycling waste tires and used oil. In the areas of Safe Waste Management and Corrective Action, the Division made significant progress toward national program goals.

PROGRAM MANAGEMENT

1. Adoption of Hazardous Waste Regulations (Criterion 1.1 of the Program Standards and Oversight Procedures (PSOP))

Utah has adopted all required rules under the RCRA program.

During FY 2008, the Division completed the necessary rule adoption to address some issues that were presented in the FY 2004 EOY Report. An authorization application (Addendum 13) will be prepared to incorporate these rule changes. The Addendum 12 application was reviewed by EPA in 2006 and will be included in the docket for EPA's upcoming Immediate Final Rule (IFR) for Addendum 12. Addendum 12 became effective May 23, 2008. Addendum 13 will be submitted in FY 2009.

The state met the standards for this criterion.

2. Authorization (PSOP Criterion 1.2)

According to data in StATS, as of September 30, 2008, Utah is authorized for 204 (96%) of 212 required rules under RCRA. As noted above, the Division has adopted required rules 156, 200, 206, 206.1, 207, 207.1 and will submit a final authorization application (Addendum 13) that covers these rules to EPA in FY 2009.

The state met the standards for this criterion.

3. Memorandum of Agreement (PSOP Criterion 1.3)

The MOA signed in February 2008 is still valid.

The state met the standards for this criterion.

4. Resource Levels and Skill Mix (PSOP Criterion 1.4)

For the 2008 state fiscal year (July 1, 2007to June 30, 2008), the Utah Legislature appropriated \$8,049,700 to the Division for its solid and hazardous waste programs. The majority of the funding for the hazardous waste program in Utah comes from state funding sources. For state FY 2008, revenues generated by state hazardous waste disposal fees comprised 35% of the Division program budget. Additionally, both hazardous and non-hazardous waste disposal fees account for 52% of the FY 2008 the Division budget. Program funding from EPA remained unchanged for FY 2008 at \$772,958, representing 10% of the total program budget. The funds and the FTE were spread across the primary areas of the Solid and Hazardous Waste Program as follows:

Program Area	\$	% of budget	FTE
P2/Compliance Asst.	\$804,970	10%	6
Safe Waste Mgmt	\$1,690,437	21%	12
Corrective Action	\$1,529,443	19%	11
Inspection, Enforcement	\$2,656,401	33%	19
Administration	\$1,368,449	17%	10
Total	\$8,049,700	100%	58

The Division operates a mature program with experienced staff. The staff include engineers (civil, chemical, environmental, mechanical), environmental scientists (geologists, chemists, toxicologist, biologists, geo-hydrologists, hydrologists), GIS Specialist, and PhDs, as well as support staff.

Professional staff has a mix of advanced education with bachelors, masters, and doctoral degrees. Five of the engineers have a Professional Engineer license and thirty of the geologists hold a Professional Geologist license. The Division lost two scientists in FY 2008.

The state met the standards for this criterion.

5. State Training Program (PSOP Criterion 1.5)

In recognition of the high level of experience the Division staff has in the hazardous waste program, each year staff members continue to receive a mix of professional and leadership development training opportunities. During FY 2008, the following list of professional courses and conferences is representative, but not all inclusive, of those attended by the Division staff:

Introduction to Criminal Environmental Investigation

EPA National Corrective Action Conference

Brownfield's Conference

Chemical Demilitarization Integrated Project Team

2008 Waste Management Symposium (Staff presented a paper on treatment at EnergySolutions)

E-Scrap

DNAPL-2 Source Zone Characterization and Remediation

EPA/State RCRA Inspector Workshop

Fast-forward

National Product Stewardship Forum

27th International Conference on Thermal Treatment

Contaminant Chemistry and Transport in Soil and Water

Slope Stability and Landslides

Avian Influenza Conference

2007 USEPA/NGWA Fractured Rock Conference

NEPA EIS training

NORA Conference

Additionally, the Division continues to provide leadership development training to its staff. This program exists in recognition of the need to prepare future leaders in the various environmental programs. Utah DEQ has developed a leadership development program to meet that need. The following types of courses are part of that ongoing effort:

DEQ 101 is a seminar that provides a brief overview of the roles and responsibilities of each office and division within the department.

Total Quality Advantage – A summary course that introduces participants to quality improvement concepts and provides a rudimentary understanding of the Five Pillars of Quality in an organization.

Getting Work Done With Others – This course focuses on interpersonal communication, presentation, conflict management, problem solving, team building skills, and cultural and diversity awareness.

Adapting to Change – This course focuses on personal learning styles, visioning, assessing potential, implementing change, using creativity, being resilient, handling stress, and empowering others.

Excellence in Supervision – This course is designed to hone people skills, including resource management, leadership, coaching, managing for diversity, and conflict resolution necessary to be an effective leader.

High Conflict Conversations – This course helps participants develop interpersonal communication skills that will help them deal with conflict and difficult communication situations in a constructive manner.

Leadership Development Course – Participants meet monthly to discuss a variety of topics that are relevant to DEQ. The curriculum is designed to apply many of the competencies related to activities within DEQ. Classes consist of a selected representative from EDO and each of the divisions in DEQ and are mentored by a DEQ senior manager. Participants also complete leadership/employee development classes, independent studies, prepare a brown bag presentation, participate in a rotation through DEQ divisions and offices, and complete a group project. Completion of the program takes two years. New classes begin in January of every year. The fourth class of this program began in January 2007.

The state met the standards for this criterion.

6. Information Management (PSOP Criterion 1.6)

EPA reviewed the Division data in the RCRAInfo national database for accuracy, completeness and timeliness. This review of data for the Safe Waste Management and Corrective Action elements of the program documented that the Division data in RCRAInfo were in accordance with EPA requirements and policies.

The State meets the standards for this criterion.

7. Records Management (PSOP Criterion 1.7)

The Division has used an electronic documents management system for several years. This system has shown, and continues to demonstrate, an increase in the efficiency of handling both incoming and outgoing documents while reducing the amount of paper used. Incoming documents are scanned, creating an electronic version which is then distributed via the Division's email system. Similarly, outgoing documents are created electronically and distributed among the appropriate technical, management, and/or legal staff for review and approval prior to printing and signing.

The Division continued to provide access to key program documents for the appropriate EPA Region 8 staff, particularly compliance and enforcement documents. Specifically, a password-protected area on the Division Web site exists where documents are posted for EPA's exclusive review and use. This allows EPA staff immediate access to these documents at anytime, rather than wait for delivery by traditional mail or e-mail.

The state met the standards for this criterion.

WASTE MINIMIZATION, POLLUTION PREVENTION, COMPLIANCE ASSISTANCE AND THE RESOURCE CONSERVATION CHALLENGE

The Division addresses waste minimization and pollution prevention primarily through a non-regulatory approach with an emphasis on compliance assistance. To bring these kinds of efforts into sharper focus, EPA established the Resource Conservation Challenge (RCC) in 2002 to serve as a way in which waste program activities could emphasize conserving natural resources and energy—an overall objective of the federal law which governs federal and, in a general sense, state waste programs. The RCC currently has four primary national focus areas in which voluntary activities are being planned and reported:

- Municipal Solid Waste Recycling (Achieve a 35% recycling rate)
- Industrial Materials Recycling
- Priority and Toxic Chemicals Reductions
- Electronics Recycling

During FY 2008, the Division participated in all four of the national focus areas and established specific priorities to target areas where significant accomplishments can be achieved. Significant resources were dedicated to the waste tire and used oil-recycling programs. Additionally, in FY 2008, the Division participated in meetings and activities associated with the development of recommendations for the Utah Legislature's consideration of an electronics recycling program. These three program areas are highlighted below within the Industrial Materials Recycling, Priority and Toxic Chemicals, and Electronics Recycling focus area sections, respectively.

35% MSW Recycling

The Division participates in a statewide recycling coalition called the "Recycling Coalition of Utah" (RCU). The RCU is a coalition of municipalities, businesses, institutions and individuals committed to promoting and improving recycling in Utah. As a leading resource for recycling in Utah, the RCU provides value to existing and new members committed to increasing and improving recycling, resource conservation, and solid waste reduction. More details are located at http://www.utahrecycles.org/.

Industrial Materials Recycling - Waste Tires

A continuing priority of the RCC is the recycling of secondary industrial materials into beneficial uses. Nationally, the effort is focused on three principal materials: coal combustion products, foundry sands, and construction and demolition debris. In Utah, the Division has focused its efforts on the recycling of waste tires.

In Utah, over 2.4 million waste tires were generated during FY 2008. Through the combined efforts of the Division, the waste tire recycling industry, and local health departments, there currently are recycling markets for all these tires and all major waste tire piles in the state have been cleaned up. This has been the result of a successful partnership in establishing a network of waste tire transporters, processors, and end users.

More specifically, the Division's role in the management of waste tires in Utah consists primarily of two components. First, the agency serves as a regulatory/enforcement agency. The Division monitors waste tire transporters and recyclers to ensure that all are operating in compliance with applicable statutes and regulations. Second, the Division oversees the activities to clean up and remove waste tire piles—those considered abandoned as well as those created at municipal landfills. The waste tire recycling program is funded by a \$1.00 per tire recycling fee collected from new tire sales, as established by the Utah Legislature.

The Utah Legislature, in the 2008 General Session modified the reimbursement allowed for waste tire recycling. The reimbursement as of May 4, 2008 is set at \$65 for crumb, \$50 for all other recycling and \$20 for beneficial use.

From the inception of the program through FY 2008, the Utah waste tire program has removed all but one abandoned tire pile and is removing, on a periodic basis, waste tire piles created at landfills as the waste tires are separated from the other waste and new piles when they are located. The one existing abandoned tire pile is currently being addressed by the site owner and may be part of a cleanup in future years.

A successful waste tire recycling program exists when a viable recycling industry is readily available. The Utah program has successfully accomplished this throughout the years of program operation. Four waste tire recyclers are currently operating in Utah:

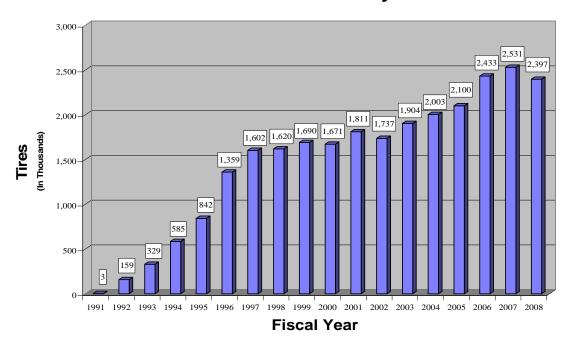
- Two industrial kilns (use waste tires as fuel).
- One crumb rubber manufacturer.
- One municipal landfill (uses chipped tires for daily cover material).

During FY 2008, the Utah waste tire program has continued to achieve success. The following are the statistics for the waste tire recycling and cleanup programs during the past fiscal year.

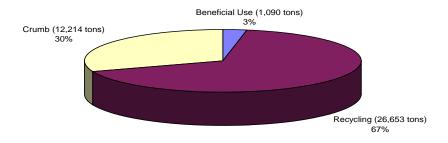
Waste Tire Recycling in Utah:

- 1. Estimated new tires sold: 3,114,000
- 2. Estimated tires recycled: 2,397,000 (based on a general conversion factor of 60 tires/ton)
- 3. Waste Tire Recycling: 39,957 tons of tires recycled (see Figure 2)
 - 12,214 tons used in crumb,
 - 26,653 tons used in recycling, and
 - 1,090 tons used in beneficial use.

Utah Waste Tires Recycled



FY08 Waste Tire Recycling by Category



Waste Tire Pile Cleanups:

- 1. 961 tons of tires were cleaned up at two landfill tire piles and one abandoned tire pile at a cost to the fund of \$75,638 (60% of total removal cost of \$124,071).
- 2. As presented in Figure 3 below, the declining tonnage of waste tire piles cleaned up since 1997 reflects the fact that all of the major abandoned waste tire piles have been addressed. For the future, most of the focus will be on waste tire piles accumulated at landfills as tires are separated from other wastes.

Waste Tire Pile Cleanups

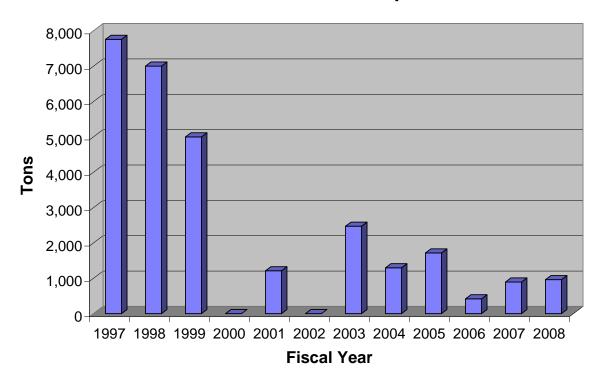


Figure 3

Priority and Toxic Chemicals:

During FY 2008, the Division worked on a number of activities designed to minimize the generation or improper disposal of hazardous wastes.

- The Division continued to work with auto salvagers to educate them on the removal of mercury switches for automobiles. As of September 11, 2008, the End of Life Vehicle Solutions Corporation (ELVS) had 85 participants in the Mercury Switch Recovery Program and had collected 11,696 switches, which is equal to 25.73 pounds of mercury.
- Both DEQ and the Division staff continued to utilize and distribute a Best Management Practices poster for auto recyclers and repair shops as part of ongoing educational outreach efforts.
- The Division provided technical assistance to businesses and the public through fact sheets, newsletters, and electronic media. The Division Web Site and P2 Library were

maintained with information regarding waste minimization, source reduction and recycling.

Used Oil Recycling Program

One of Utah's priorities for addressing recyclable materials is the Used Oil Program. UDEQ established this program in 1993, and has had significant success in the collection and recycling of used oil in an environmentally responsible manner. There are two principal elements of the Utah Used Oil Program in Utah: Oil from businesses and the Do-It-Yourself (DIY) program.

Figure 4 shows the total amount of used oil recycled from both elements of the program from 1995 through 2007. The data indicate that the amount of used oil recycled in the subject period ranged from about 8,880,000 to a high in 2006 of 12,320,000 gallons per year.

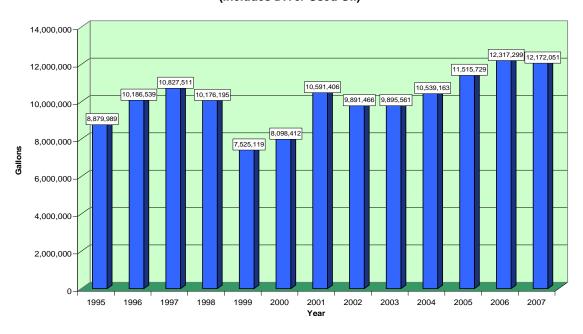


Figure 4 - Total Used Oil Recycling in Utah, 1995-2007 (Includes DIYer Used Oil)

A closer look at the DIYer element of the program is presented in Figure 5. The data show a steady growth in the amount of DIYer used oil collected for recycling over a 12-year period although there has been a slight decrease in the collection amounts for the past two fiscal years. In FY 2008, approximately 480,000 gallons of DIYer used oil were collected. The slight decrease in collections for the past two years can be explained by the national decline in DIYer used oil generation and collection due to extended motor oil drain intervals approaching 7,000 to 10,000 miles versus the old recommended 3,000 miles per oil change; advances in motor oil formulations and additives extending the life of motor oils;

the ever increasing number of conveniently located Do-It-For-Me oil change facilities expanding into rural areas; and more recently the down turn in the economy.

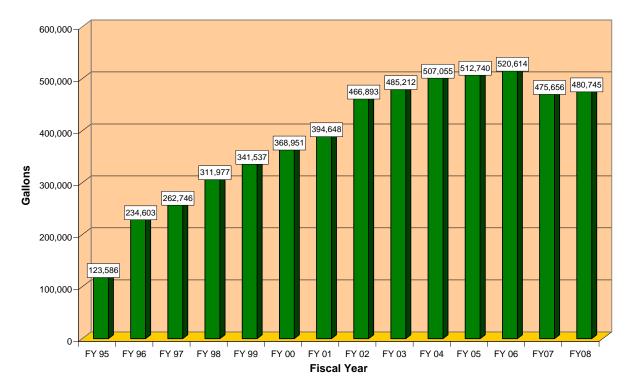


Figure 5 - Utah DIYer Used Oil Collection 1995-2008

The Used Oil Program continues to develop partnerships with cities and counties throughout the state to coordinate public education activities as a result of the storm water run-off permit regulations. One of the requirements of the storm water permits is to develop and distribute information to the public to educate them about chemicals and products, including used oil that should not be discharged into storm drains. The Division continues to work with these local agencies to incorporate used oil recycling educational material and messages promoting proper used oil recycling, including locations where to take used oil generated by do-it-yourselfers (DIYers) in order to have it collected and recycled at no cost.

Utah has also invested much into education and outreach for the used oil program as described in the following highlights:

1. The Division awarded a grant to finance the design, printing and installing of billboards promoting used oil recycling at locations throughout Utah. A total of 19 locations were

chosen, combining rural and urban locations. The billboards ran for a 30-day period or longer in most areas. The billboards in certain rural areas of the state were posted for 60 days or longer to target Utah's farming and ranching communities. The message on the billboards helped educate people about why used oil should be recycled and where free recycling centers were located in their areas.

- 2. The Division also co-sponsored, with NAPA Auto Parts and the Rocky Mountain Raceway (RMR), a used oil recycling promotion in FY 2008. During the summer months, the public could bring their DIYer used oil to any NAPA Auto Parts Store located along the Wasatch Front and receive a pair of free admission tickets to the NASCAR race scheduled for August 23, 2008. The promotional package also included TV ads promoting used oil recycling that were shown on FOX 13, signage at RMR and informational booth space at the race event.
- 3. During FY 2008, the Division staff continued to visit high school automotive classes and vocational/technical schools throughout Utah to educate students on the proper management of used oil and used oil filters, in addition to where to take oil to be recycled. At the end of the presentation, the students were provided with a survey to complete. The results of the surveys will assist the Division in developing new ways to reach the public and educate them on used oil recycling and the proper management of used oil and filters.
- 4. All charts depicting DIYer used oil (state-wide totals and county totals) and total used oil (DIYer and business) collected in the state since the program began in 1993 under the Division, continue to be updated on the Web to reflect current information. The latest edition of the Used Oil Drip, the used oil program newsletter, is also available on the Web. Annual report information for calendar year 2007 provided by all permitted used oil facilities has been summarized and is available on the Web. The Web site lists each permitted facility in Utah and how much used oil each facility processed, burned and/or transported.
- 5. The Division worked with a local TV channel to produce new 15-, 30- and 60-second TV commercials promoting used oil recycling. The new commercials were aired on the three major TV stations in Utah over a five-week period. A Spanish commercial was also created working with Utah's major Spanish TV station.
- 6. To target males between the ages of 18-50, the Division awarded a promotional/educational grant to reach male audiences during the time period of Utah Jazz playoff games. This was a seven-week period in the spring of 2008. The package included the creation of a new 30-second TV commercial which aired on Channel 14, KJZZ; two, new 30-second radio commercials which aired on KFAN, 1320AM radio and the playing of the Division's 60-second used oil recycling commercial at six major movie theaters along the Wasatch Front. A copy of the commercials is on the Division's web page.

- 7. The Division continues to support and participate in radio spots promoting used oil recycling. The Division created individual radio spots which aired on the four major radio stations in Utah. The radio stations with the largest audiences of county music, rock and roll, easy listening and alternative music were selected and aired the individualized used oil recycling advertisements. The Division also produced a new 60-second Spanish radio spot with the major Spanish-speaking radio station in Utah (Bustos Media stations KDUT & KBMG-FM) which ran for a five-week period.
- 8. Used oil recycling information and promotional materials provided by the Division continue to be distributed by numerous local health departments throughout the state. The promotional material is distributed at many local community events such as county fairs, demolition derbies, natural resources fairs, and various Earth Day events, and especially at sporting events at college campuses. The Used Oil Drip, the Division's used oil recycling newsletter, is still being published and distributed to city and county officials, collection centers, local health department officials, state legislators, and other state and federal agencies. The newsletter is also requested by and mailed to environmental program staff from other states that are considering establishing or have an existing DIYer used oil recycling program.
- 9. Boy Scouts of America Eagle Scout projects are ongoing. A popular project is to coordinate the labeling of garbage containers with stickers related to used-oil recycling as a reminder to keep used oil from being disposed of in private dumpsters.

Electronics Recycling:

The Division and the Recycling Coalition of Utah are being proactive in efforts to bring business and government together to determine ways to address e-waste issues and concerns in Utah. This collaborative effort has resulted in a wide variety of suggestions and recommendations to promote and improve e-waste recycling in Utah. The Division has participated in the Product Stewardship Institute specifically working to identify methods to promote recycling of electronics and fluorescent lamps.

Other State efforts:

Supplemental Environmental Projects (SEPs) were considered as part of compliance actions for waste minimization and pollution prevention opportunities. One SEP was proposed by respondents to enforcement actions during FY 2008. The Clean Harbors Aragonite facility provided hazardous waste management and disposal services for the Tooele School District and the University of Utah. Clean Harbors spent \$44,000.00 on this SEP.

The Division contracted with Dan Jones and Associates, a market research and public opinion firm, to conduct a statewide recycling telephone survey. Information was not available as to how the majority of

Utah citizens actually felt about recycling related issues, so the survey questions were formulated to provide a better understanding. One survey requirement was obtaining at least 20% of the responses from rural areas. This was included to demonstrate any differences in attitudes, activities, or needs of rural versus urban areas.

Calls were completed in August 2008, and there were 803 respondents (76% from urban areas and 24% rural) for a total error rate of $\pm 3.5\%$.

The survey results showed a high level of support for recycling in Utah, across the demographic categories, with 87% of respondents saying it is important or very important. Support for recycling has risen in the last five years, and 89% feel their community should have a recycling program. Access to recycling has improved, but 66% of respondents want more, and only 43% said they have access to Household Hazardous Waste (HHW) drop-off sites. Most respondents (66%) said they are willing to pay to have electronic equipment recycled. The percent of respondents who still change vehicle oil at home and need to recycle it is low (< 20%). Requests for more glass recycling and more recycling information were common.

The majority of residents prefer locally organized recycling programs over State controlled, but many comments indicate a desire for State assistance or oversight if it can help the programs be more efficient. Based on comments, many residents desire reducing recycling fees and having private industry involvement.

The following recommended collaborative actions, for State and Local Government and Private Business, were developed from the survey results:

- Increase recycling access (curbside or convenient drop-off locations) and keep it simple.
- Improve availability to glass, HHW, and electronic collection programs.
- Provide additional recycling information to residents and keep it up-to-date.
- Make recycling as cost effective as possible to keep fees to a minimum. Emphasize that recycling start up costs may help reduce long-term waste disposal costs and resource use.
- Coordinate the recycling activities of State and local governments and private business.

The complete survey results may be viewed at: http://www.hazardouswaste.utah.gov/recycling survey 2008.pdf

The State meets the standards for this criterion.

SAFE WASTE MANAGEMENT

Utah has a significant number of facilities that manage hazardous waste, and the FY 2008 PPA supports the State's and EPA's goal of safe management of hazardous waste through the use of approved controls

(closure plans, permits, operating permits, and other similar type of approved controls). The PPA includes performance measures for progress towards closure of facilities, controls for facilities closing with waste in place, and initial and renewed operating permits for facilities that manage hazardous wastes.

Universe of Treatment, Storage and Disposal Facilities (TSDFs)

As indicated by the data that the Division maintains in the RCRAInfo database and based on the legal and operating status of the hazardous waste management units (HWMUs), Utah has 59 current and past RCRA Treatment Storage and Disposal Facilities (TSDFs). As noted in Table 1, by FY 2008, many of the 59 TSDFs either have been referred to the CERCLA program for remediation or are no longer active because they have closed all units.

Table 1 - Summary of TSDFs for Utah¹

Historical ² Utah TSDF Universe	59
TSDFs with all HWMUs referred to CERCLA	7
TSDFs with RCRA as lead authority	53
TSDFs with all HWMUs clean closed and terminated permit or interim status	37
TSDFs with active ³ HWMUs	15

^{1 -} Data based on EPA Region 8 Universe Report (UND02) dated August 7, 2006.

1. Progress toward Closure Plan Approvals and Closure Verifications (PSOP Criterion 3.1)

As presented in Table 2, there are 52 RCRA-lead TSDFs with closed or closing HWMUs, including 17 with closing land disposal units (LDUs), 42 with closing treatment and storage units (TSUs), and three with closing combustion units (CUs).

As detailed in Table 2 below and in the FY 2008 Commitments Table in the Attachments section, the Division target for LDUs closure plan verification (CL380) for FY 2008 was three, and the Division accomplished a total of three verifications. The target for closure verifications (CL380) for TSUs was five, and four were accomplished. The Division also accomplished two closure plan approvals (CL360) and one Closure plan approval for a CU (CL360).

The Division continued to make significant progress in addressing hazardous waste units on the closure track. Closure plans have been approved for 185 out of 196 (94%) of all closing units, and closure has been verified for 86% (168 of 196) of all closing units.

^{2 -} The Historical TSDF Universe includes all TSDFs that manage or managed hazardous waste in regulated hwmus, either currently or in the past.

^{3 -} Active hwmus are those regulated units that are still managing hazardous wastes or have not yet completed the closure process to the point where the Operating or Post-Closure Permit, or Interim Status has been terminated.

Table 2 - Status of Closing Units in $Utah^1$

Status, Activity	LDUs	TSUs	CUs	Total ²
TSDFs on Closure Track with appropriate units ¹	17	42	3	49
Units on Closure Track	53	138	5	196
Units with Closure Plan Approved at start of FY 2008	52	129	4	185
Closure Plans Approved in FY 2008	0	2	1	3
Units with Closure Plan Approved at end of FY 2008	52	131	5	189
Units with Closure Verified at the start of FY 2008	47	112	3	162
Unit closures verified in FY 2008	3	4	1	8
Units with Closure Verified at end of FY 2008	49	116	3	168

 $^{1-\}mbox{Includes}$ only those managed by RCRA, not those referred to CERCLA.

The following table summarizes the closure activities (CL360, CL370, and CL380) in FY 2008:

Table 3 – FY 2008 Closure Activities in Utah

Facility	Activity	Date
Deseret Chemical Depot	Closure plan approval (CL360) – CAMDS -DFS Closure verification (CL380) – CAMDSMDC2 UNIT B	05/01/2008 11/03/2006 8/28/2008
ATK Launch Systems - Promontory	Closure Verification (CL380) – I-10 CLO8 1 TSU	11/2/2007
Dugway Proving Ground	Closure plan approval (CL360) – HWMU39 Closure plan approval (CL360) – HWMU55 Closure plan approval (CL360) – HWMU58 - 1	05/5/2008 04/7/2008 08/28/2008
Westinghouse – Western Zirconium	Closure Plan Approvals (CL360) Burn Out Oven and Storage Pad 2 TSUs Closure plan approval (CL360) – Burnout Oven Closure plan approval (CL360) – Container Closure Verification (CL380) – Burn Out Oven 1 TSU Closure Verification (CL380) – Storage Pad 1 TSU	04/9/2008 04/09/2008 04/09/2008 08/19/2008 09/23/2008

^{2 –} Total number of TSDFs differs from the sum of the three facility columns because some facilities have more than one type of unit

The State meets the standards for this criterion.

2. Quality of Closure Plans and Verifications (PSOP Criterion 3.2)

The State meets the standards for this criterion.

3. Progress toward Controls for Post-Closure and Operating Facilities (PSOP Criterion 3.3)

In Utah, there are 26 RCRA-lead TSDFs that require controls for management of hazardous wastes in either post-closure (PC) LDUs or operating HWMUs: 13 require PC care, 20 have operating units, and seven have both. Starting in 2005, these 26 facilities have been consolidated into a revised baseline universe for approved controls to track progress toward national goals.

As presented in Figure 6 below, at the beginning of FY 2008, Utah had placed the appropriate post-closure or operating controls for all units at 23 (88%) of the 26 facilities in the baseline universe. The national goal for FY 2008 was 85%. The Division did not have any FY 2008 PPA targets for facilities under Approved Controls (OP200, PC200).

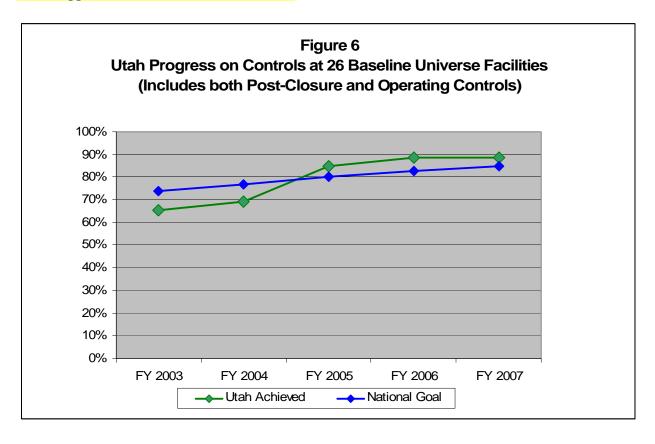


Table 4 below lists FY 2008 post-closure activities in Utah, while Table 5 indicates the status of the Baseline Facilities and their units as of the end of FY 2008.

Table 4 – FY 2008 Safe Waste Management Activities in Utah

Facility	Activity	Date
BP Amoco Hazardous Waste Management Facility	Permit renewal – Post-Closure Permit Renewal	10/28/2007
	Hazardous Waste Storage Permit Issuance – 4 Units – HS-1, ES-1, RH-1 and Segment Storage	09/30/2008
ATK Launch Systems – Promontory	Hazardous Waste Storage Permit Reissuance – 6 Units – M-186, E-501, M-705S, M-136, M-47 and M-603	09/30/2008

Table 5 – Permit Status for Utah TSDFs Needing Controls						
	PC	OP	OP	OP	OP	
TSDF and Unit Categories	LDU	LDU	TSU	CU	TOT	TOT ¹
Facility Level measures for Baseline Universe						
TSDFs on 2005 Consolidated Baseline Universe	17	5	16	4		26
TSDFs with all units controlled at start of 2008	10	5	14	4		23
TSDFs with all units controlled in 2008	0	0	0	0		0
TSDFs with all units controlled at end of 2008	10	5	14	4		23
Facility Level Percentage	59%	100%	88%	100%		88%
Unit Level measures for Baseline Universe						
Units in 2005 Consolidated Baseline Universe	38	6	128	7	184	222
Units with controls in place at start of 2008	27	6	118	7	174	201
Units with controls in place during 2008	1	0	0	0	0	1
Units with controls in place at end of 2008	28	6	118	7	174	202
Unit Level Percentage	74%	100%	92%	100%	99%	91%

^{1 -} Total number differs from the sum of the three facility columns because some facilities have more than one type of unit.

The Division had a target of two permit renewals. A post-closure permit was reissued for BP Amoco Hazardous Waste Management Facility and a permit renewal was issued to Ashland Chemical.

The Division also received 86 permit modification requests (excluded temporary authorizations) during FY 2008 and completed 87 modifications as follows:

- 1. Class I 44
- 2. Class Ia 16
- 3. Class II 22
- 4. Class III 4
- 5. Agency initiated 1

During FY 2008, the Division issued 39 Emergency Permits. Three trial burns were performed at TEAD, Clean Harbors Aragonite, and TOCDF. The agency also notes that Division has issued permits to a vast majority (178 out of 182 or 98%) of operating units at its facilities. Only three open burning/open detonation (OB/OD) units and one storage unit at two facilities remain.

The two facilities with outstanding operating permits at the end of FY 2008 were ATK Launch Systems – NIROP, and ATK Launch Systems – Promontory. The Division has developed its own OB/OD permit guidance to address these facilities and has made considerable progress with interim activities:

- ATK Launch Systems Bacchus: During FY 2008, the Division, ATK and the Navy completed discussions on splitting the Bacchus facility into Plant 1 (owned by ATK) and the NIROP (owned by the Navy). The permit application for the six hazardous waste storage units and the OB/OD unit was revised to a permit application for four storage units at Plant 1: HS-1, ES-1, RH-1 and Segment Storage. The Plant 1 permit was issued on September 30, 2008. A revised permit application for the NIROP was submitted on November 10, 2008. The Division intends to issue the permit for NIROP that includes the OB/OD unit and the storage units ES-2 and the Gondola by September 30, 2009.
- ATK-Launch Systems Promontory: The Division is currently reviewing ATK's response to comments on the Division's review comments of their ODOBi emission factors report. The report provides the data for the OB/OD test that was conducted at Dugway Proving Grounds in June 2006. The Division will need to approve the report before ATK moves forward with its permit application.

The State meets the standards for this criterion.

4. Quality of Permits or other controls for Post-Closure and Operating Units and Facilities (PSOP Criterion 3.4)

The State meets the standards for this criterion.

CORRECTIVE ACTION

Assessment, Ranking and Universe Identification

1. Completion of RCRA Facility Assessments (PSOP Criterion 4.1)

According to data in RCRAInfo, all 39 Utah TSDFs subject to corrective action have been assessed through a RCRA Facility Assessment (RFA, CA050) or equivalent, and most have been given a CA rank (high, medium, low). After the assessment, 21 TSDFs were identified as needing CA beyond the assessment stage. Of the 21 facilities needing CA, 11 were ranked "high" for their potential or actual releases of hazardous contamination. In 1997, these 11 facilities were established as the Utah Corrective Action Baseline Universe. Stabilization evaluations (CA225) have been completed for the 11 high-ranked facilities.

The State meets the standards for this criterion.

2. Quality of RCRA Facility Assessments (PSOP Criterion 4.2)

Not applicable since the state previously met the standards for this criterion, and no additional work is anticipated.

The State meets the standards for this criterion.

3. Completion of Investigations (PSOP Criterion 4.3)

The PPA target, at the area level, was two RFI Approvals (CA400). The Division exceeded the target by completing 46, as listed in Table 8 below.

The State meets the standards for this criterion.

4. Quality of Investigations (PSOP Criterion 4.4)

The state meets the standards for this criterion.

5. Completion of Cleanup (PSOP Criterion 4.5)

The FY 2008 PPA had the following targets in this area: three RFI Approvals (CA200) at the area level; two Remedy Selection (CA400) at the area level; and six Construction Completes (CA550) at the area level. The Division exceeded the target of (CA400) by completing 46. The Division exceeded the target of (CA550) by completing 37. The Division also completed 39 corrective action completes (CA999).

The following table summarizes the corrective action activities in FY 2008:

Table 8 – FY 2008 Corrective Action Activities in Utah

Facility		Activity	Date
Pennzoil Refinery		RFI Approved (CA200)	3/20/2008
Anderson	Geneva	CMS Work plan Approved (CA300) 17 SWMU's (1.01-BP-10, 1.01-BP-	9/9/08
Development, INC.		13, 1.01-BP-14, 1.01-BP-15, 1.01-BP-2A, 1.01-BP-2B, 1.01-BP-3, 1.01-	

Facility	Activity	Date
	BP-4, 1.01-BP-6, 1.01-BP-7, 1.01-BP-8, 1.01-BP-9, 1.01-BP-A1, 1.01-	
	BP-A2, 1.01-BP-A3, 1.01-CP-12, 1.01-CP-7)	
	CMS Work plan Approved (CA300) 1 SWMU (1.04-MS-19)	1/16/08
	CMS Work plan Approved (CA300) 1 SWMU (1.04-BP-11)	1/22/08
	CMS Work plan Approved (CA300) 3 SWMU's (2.01-BF-31, 2.06-MS-	1/25/08
	2, 2.13-MS-1) CMS Work plan Approved (CA300) 1 SWMU (3.13-MS-29)	3/12/08
	CMS Work plan Approved (CA300) 1 SWMU (2.14-MS-3)	11/5/07
	Civis Work plan ripproved (2:1300) 1 5 WHO (2:14 Wis 3)	11/5/07
	CA Complete (CA550NF) 9 SWMU's (MS-3, MS-17MS, MS-17PM,	12/17/07
	PM-4, PM-5, PM-6, , PM-7, PM-8, MS-5B)	
	CA Complete (CA550NF) – 13 SWMU's (MS-6, MS-7, MS-8, MS-9,	5/5/08
	MS-25C , MS-25D, MS-25E, MS-25F, MS-25G, MS-25H, MS-25, MS-	
	10, MS-11)	
	CA Complete (CA000NE) 0 SWIMIU's (MS 2 MS 17MS MS 17DM	12/17/07
	CA Complete (CA999NF) 9 SWMU's (MS-3, MS-17MS, MS-17PM, PM-4, PM-5, PM-6, PM-7, PM-8, MS-5B)	12/17/07
	CA Complete (CA999NF) 13 SWMU's (MS-6, MS-7, MS-8, MS-9, MS-	5/5/08
	25C , MS-25D, MS-25E, MS-25F, MS-25G, MS-25H, MS-25, MS-10,	272700
	MS-11)	
Dugway Proving Ground	RFI Approved (CA200) (SWMUs 173, 209, 210)	09/10/2008
	Construction Complete (CA550) (SWMUs 17,)	8/8/089/10/084/7/08
	Construction Complete (CA550) (SWMUs 173,)	9/10/08
	Construction Complete (CA550) (SWMUs 197,)	9/10/08
	Construction Complete (CA550) (SWMUs 209,)	8/28/08
	Construction Complete (CA550) (SWMUs 210,)	8/28/08
	Construction Complete (CA550) (SWMUs 52,)	9/10/084/7/08
		9/10/08
	CA Complete (CA999) SWMU 17	9/10/08
	CA Complete (CA999) SWMU 173	8/28/08
	CA Complete (CA999) SWMU 197 CA Complete (CA999) SWMU 209	
	CA Complete (CA999) SWMU 210	
	CA Complete (CA999) SWMU 52	
Ensign-Bickford Company	RFI Approved (CA200) – 44 areas (SWMUs 1-44)	2/20/2008
	G140 A 1 (G140 F0) 44 (G170 F1) 4 (G170 F1)	4/2/2000
	CMS Approved (CA350) – 44 areas (SWMUs 1-44)	4/2/2008
	CMI Workplan (CA500) – 35 areas (SWMUs 1-7, 10-12, 15-22, 24, 26-	4/2/2008
	31, 33, 35-42 and 44	7/2/2000
	21, 20, 30 12 uiu 11	
	CMI Construction Complete (CA550) – 9 areas (SWMUs 8, 9, 13, 14, 23,	9/9/2008
	25, 32, 34 and 43	
		0.40.40.00
	CA Complete (CA999NF) – 9 areas (SWMUs 8, 9, 13, 14, 23, 25, 32, 34	9/9/2008
	and 43	
Ninigret Construction	RFI Approved (CA200) – 31 areas (SWMUs 3-19, 21-34	09/10/2008
(formerly Englehard)	RFI Approved (CA200) - 31 aleas (SWMOs 3-1), 21-34 RFI Approved (CA200) - SWMU 20E (Phase 3) 10 acres	11/2/2007
2	RFI Approved (CA200) - SWMU 20E (Phase 3) 31 acres	5/29/2008
	' ' '	

Facility	Activity	Date
	CMI Construction Complete (CA550) – SWMU 20E (Phase 3) 31 acres	3/7/2008
	CA complete (CA999RM) SWMU 20E (Phase 3) 10 acres CA complete (CA999RM) SWMU 20E (Phase 3) 31 acres	11/2/2007 5/29/2008
Vertellus (formerly Reilly)	RFI Phase II Supplemental Workplan Approved (CA150) – 10 areas (SWMUs 1-10)	8/14/2008
Tooele Army Depot	CMI Construction Completed (CA550) – SWMU 50 CMI Construction Completed (CA550) – SWMU 51 CMI Construction Completed (CA550) – SWMU 56 CA Process Terminated (CA999) – SWMU 42 CA Process Terminated (CA999) – SWMU 46 CA Process Terminated (CA999) – SWMU 50 CA Process Terminated (CA999) – SWMU 51	01/15/2008 01/15/2008 6/11/2008 12/3/2007 9/11/2008 1/15/2008
Utah Test and Training Range	RFI Approved (CA200) – SWMU 71 RFI Approved (CA200) – 9 areas (SWMUs 3, 19, 22, 24, 31, 33, 48N, 91 and 95) RFI Approved (CA200) – 9 areas (SWMUs 2, 4, 13-16, 21, 48W and 60) RFI Approved (CA200) – 17 areas (SWMUs 9, 17, 30, 36E, 36W, 37, 37W, 39N, 39W, 43, 44, 48E, 61, 62, 65, 67 and 92 RFI Approved (CA200) – 4 areas (SWMUs 20, 27, 29 and 34) CA Complete (CA999NF) – SWMU 71 CA Complete (CA999RM) – 5 areas (SWMU 3, 19, 22, 31, and 91) CA Complete (CA999NF) – SWMU 13	12/26/2007 1/7/2008 3/12/2008 5/2/2008 9/30/2008 12/26/2007 1/7/2008 3/12/2008

The Division also continued to conduct oversight of the following voluntary corrective action sites:

- Autoliv (former Volvo GM facility) Approved a Revised Soil Risk-Based Remediation Goals and Soil Sampling and Analysis Plan on July 31, 2008. Reviewed a Post-Remediation Groundwater Monitoring Report and generated comments that were issued on August 12, 2008.
- Rocky Mountain Power (UP&L) Jordan Substation Approved a Human Health Risk Assessment Report on March 19, 2008.

Ongoing oversight of groundwater monitoring as required through approved site management plans was conducted at MOOG, Detroit Diesel, Northrup Grumman (Litton Defense Systems), Mosquito Abatement SLCC, Box Elder Mosquito Abatement, Aero Tech Manufacturing, Farmers Grain COOP, Univar SLC, Mark Miller Toyota, and La-Z-Boy Tremonton.

Figure 7 illustrates UDEQ progress in meeting the Corrective Action national goal for Remedy Decisions. The regional target for FY 2008 is 42%; Utah has achieved remedy selection at 4 of 11 facilities or 36%.

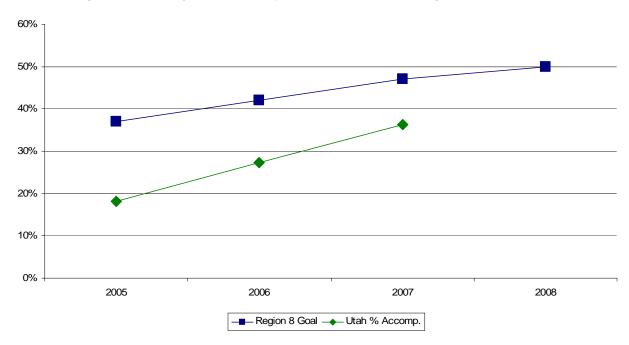


Figure 7: Utah Progress on Remedy Selection (CA400) at 11 High-Ranked Facilities

Figure 8 illustrates progress in achieving the Corrective Action national goals for Construction Completion. The regional target for FY 2008 is 23%; Utah has achieved remedy selection at 3 of 11 facilities or 27%.

Figure 8: Utah Progress on Construction Completion (CA550) at 11 High-Ranked Facilities

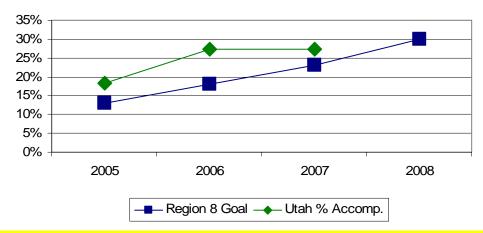


Figure 9 presents the status and progress of cleanup for the 249 areas at Utah's 11 high-ranked facilities over the past several years. The agencies note that incremental progress toward cleanup goals is most clearly demonstrated when area level data are used. In Figure 9, the data indicate how many of the 249 areas at the 11 high-ranked CA facilities there were in the workload universe, and how many had at least reached each of the following three primary phases of cleanup by the beginning of FY 2008:

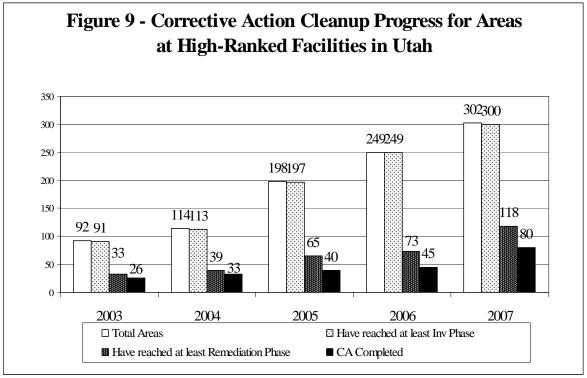
- 1. The Investigation Phase (includes all investigation events, such as RFI imposition, RFI completion, Risk Assessment, etc.);
- 2. The Remediation Phase (includes all cleanup events, such as Remedy Selection, CMI Construction Completion, Stabilization Measures Imposed, etc.); and
- 3. The Completion of CA, Termination (all cleanup goals achieved).

The data in Figure 9 indicate a significant growth (from 249 in 2006 to 302 in 2007) in the number of areas that have been designated at the 11 high-ranked facilities. This is due primarily to the breaking out of individual areas that are proceeding through CA at different rates. The Division expects that further breakouts of CA areas will occur in the future.

The data in Figure 9 also indicate that:

- 1. Almost all of the areas have reached at least the investigation phase;
- 2. There has been significant progress in the number of areas that have reached the remediation phase (73 in 2006 to 118 in 2007, and

3. The number of areas that have completed the CA process has increased (from 45 in 2006 to 80 in 2007).



The State meets the standards for this criterion.

6. Quality of Cleanup and Remediation Activities (PSOP Criterion 4.6)

The State meets the standards for this criterion.

7. Progress in Achieving Environmental Indicators (PSOP Criterion 4.7)

Having current Human Risks and Migration of Contaminated Ground Water under control at high-ranked CA facilities is a high priority of the national RCRA program. The Division supports this priority by focusing efforts on the 11 high-ranked facilities in Utah and tracking progress toward the national goals for the two measures.

Current Human Exposure Under Control (CA725): Utah has achieved this Environmental Indicator for 100% of its high-ranked facilities, exceeding the 2005 national goal of 95%.

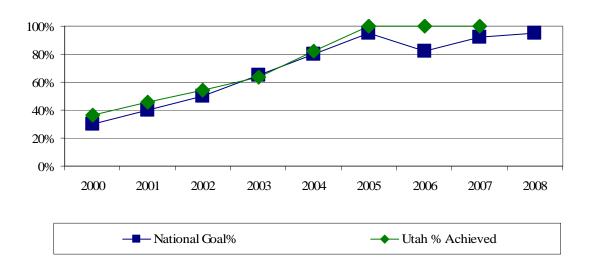


Figure 10 - Utah Progress on Current Human Exposures Under Control at 11 High-Ranked Facilities

Migration of Contaminated Ground Water Under Control (CA750): During FY 2008, the Division continued to work to complete the EI's at ATK–Bacchus, Vertellus (formerly Reilly Industries), and Western Zirconium. The current completion percentage of 73% (8 of 11 GPRA corrective action baseline facilities) is unchanged from the previous fiscal year.

ATK-Bacchus has eliminated the original sources of contamination, continues to monitor the groundwater contamination plume, and has constructed a pilot plant that, when fully operational, will treat the perchlorate contamination in-situ.

Reilly (currently Vertellus) is proposing interim measures for several sources areas at its property prior to finalizing the groundwater monitoring network. The Division has instructed Vertellus to conduct these activities concurrently.

Western Zirconium is working with international experts on the design of a barrier wall to contain leakage from its wastewater ponds. Based on the various types of wastewater being discharged to these respective ponds, the design team has had difficulty coming up with a barrier wall that can contain the mixed contamination.

The effort to address the groundwater EI at all of these facilities is ongoing.

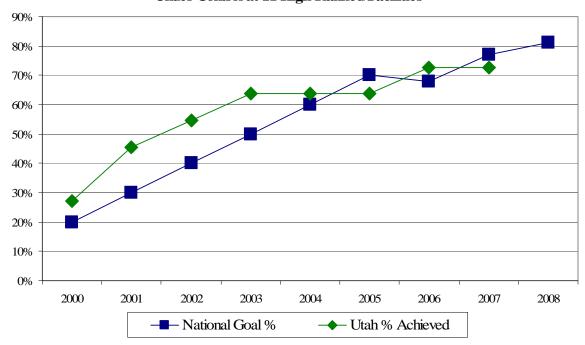


Figure 11 - Utah Progress on Ground-Water Migration Under Control at 11 High-Ranked Facilities

The State meets the standards for this criterion.

KEY ACTION ITEMS FOR FY 2009

ATTACHMENTS

Performance Standards and Measures Summary Table FY 2008 Commitments Sheet

Steve Burkett, Director Solid and Hazardous Waste Program U.S. Environmental Protection Agency – Region 8 Dennis R. Downs, Director Date

Division of Solid and Hazardous Waste Utah Department of Environmental Quality

ATTACHMENTS

PSOP Program Review Summary Table

FY 2008 Commitments Table

FY 2008 EOY Review Summary for the Utah Solid & Hazardous Waste Division					
Criterion	Std Met?	Comments			
PROGRAM MANAGEMENT					
1.1 Adoption of federal rules by the state	YES				
1.2 Authorization	YES				
1.3 Memorandum of Agreement	YES				
1.4 Resources and Skill Mix	YES				
1.5 State training program	YES				
1.6 Data Timeliness, Accuracy and Completeness	YES				
1.7 Records Management	YES				
HAZARDOUS WASTE MINIMIZATION					
2.1 Haz Waste Min/P2 Activities	YES				
SAFE WASTE MANAGEMENT					
3.1 Progress toward Closure	YES				
3.2 Quality of Closure Plans and Verifications	YES	Dugway reviewed			
3.3 Progress toward Controls for PC/OP Facilities	YES				
3.4 Quality of PC/OP instruments	YES	ATK reviewed			
CORRECTIVE ACTION					
4.1 Completion of RFAs	YES				
4.2 Quality of RFAs	YES				
4.3 Completion of Investigations	YES				
4.4 Quality of Investigations	YES				
4.5 Completion of Cleanup	YES				
4.6 Quality of Cleanup and Remediation	YES				
4.7 Progress in Achieving EIs	YES				

FY 2008 Hazardous Waste Program Commitme	ents for UTA	ΛΗ			
	# of	Achieved	FY 2008		
Event	Facilities or Units	by EOY FY2007	Committed	Achieved	EOY
Closure Activities (all at unit level)					
Closure Plan Approval (CL360) for LDUs	53	52		0	52
Closure Verification (CL380) for LDUs	53	47	3	3	50
Closure Plan Approval (CL360) for TSUs	142	129		2	131
Closure Verification (CL380) for TSUs	142	112	5	4	116
Closure Plan Approval (CL360) for CUs	6	4		1	5
Closure Verification (CL380) for CUs	6	3		0	3
Permit Activities at GPRA Universe Facilities (a	ll at facility	level)			
Permitted Facilities under Approved Controls (Manual counts at facility level)	26	23		0	23
Permit Renewal due this FY (Manual counts at facility level)	6	4	2	2	6
Permit Activities for GPRA Universe Facilities (at unit leve	l)			
Controls in Place for LDUs on Closure Track	38	32		3	35
Controls in Place for LDUs on Operating Track	5	5		0	5
Controls in Place for TSUs on Operating Track	129	119	5	5	124
Controls in Place for CUs on Operating Track	6	6		0	6
Corrective Action Activities	at	GPRA	Unive	erse	Facilities
(activities are at facility level, unless specified at		l	l	T -	l
RCRA Facility Assessments (CA050)	11	11		0	11
Overall Facility NCAPS Ranking (CA075)	11	11		0	11
Facility Stabilization Assessment (CA225)	11	11		0	11
Facility Remedy Selection (CA400) (GPRA measure)	11	4		0	4
Facility Construction Completion (CA550)	11	3		0	3
(GPRA measure) Human Health Exposures Controlled Determination (CA725) (GPRA measure)	11	11		0	11
Groundwater Migration Controlled Determination (CA750) (GPRA measure)	11	8		0	8
RFI Imposed (CA100) (area level)	479	477		0	477
RFI Approved (CA200) (area level)	479	364	3	3	364
Remedy Selection (CA400) (area level)	479	305	2	46	351
Construction Completion (CA550) (area level)	479	95	6	37	132
Stabilization Measures Implemented (CA600) (area level)	456	54		0	54
Stabilization Construction Completed (CA650) (area level)	456	53		0	53
Areas at least to Investigation stage (CA100+)	479	477		0	
Areas at least to Remediation stage (CA400+)	479	305		46	352
Corrective Action Completed (CA999 area level)	479	77		39	116